

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	§	
	§	
Transition from TTY to Real-Time Text	§	CG Docket No. 16-145
Technology	§	
	§	
Petition for Rulemaking to Update the	§	GN Docket No. 15-178
Commission's Rules for Access to Support the	§	
Transition from TTY to Real-Time Text	§	
Technology, and Petition for Waiver of Rules	§	
Requiring Support of TTY Technology	§	
	§	

**INITIAL COMMENTS OF THE TEXAS 9-1-1 ENTITIES  
ON T-MOBILE'S PETITION FOR CLARIFICATION**

The Texas 9-1-1 Alliance,<sup>1</sup> the Texas Commission on State Emergency Communications,<sup>2</sup> and the Municipal Emergency Communication Districts Association<sup>3</sup> (collectively, the "Texas 9-1-1 Entities") respectfully submit the following initial comments on the February 27, 2017 Public Notice in the Federal Communication Commission's (the

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<sup>1</sup> The Texas 9-1-1 Alliance is an interlocal cooperation entity composed of 26 Texas emergency communication districts with E9-1-1 service and related public safety responsibility for approximately 63% of the population of Texas. These emergency communication districts were created pursuant to Texas Health and Safety Code Chapter 772 and are defined under Texas Health and Safety Code Section 771.001(3)(B).

<sup>2</sup> The Texas Commission on State Emergency Communications ("CSEC") is a state agency created pursuant to Texas Health and Safety Code Chapter 771, and by statute is the state program authority on emergency communications. CSEC's membership includes representatives of the Texas 9-1-1 Entities and the general public, and directly oversees and administers the Texas state 9-1-1 program under which 9-1-1 service is provided in 81% of Texas' 254 counties, covering approximately 27% of the state's population.

<sup>3</sup> The Municipal Emergency Communication Districts Association ("MECDA") is an association of 26 municipal emergency communication districts, as defined under Texas Health and Safety Code Section 771.001(3)(A), that are located primarily in the Dallas-Fort Worth area.

“Commission’s”) above-referenced proceedings involving T-Mobile’s petition for clarification<sup>4</sup> of the Real-Time Text (“RTT”) Order.<sup>5</sup>

## **I. Summary of Initial Comments**

While the precise scope of what T-Mobile requests through its petition for clarification is somewhat unclear, the T-Mobile petition for clarification more likely appears to involve the identification of the appropriate demarcation point in situations where T-Mobile is requested to deliver an RTT call in IP format to an Emergency Services IP Network (“ESInet”)<sup>6</sup> with Next Generation 9-1-1 Core Services (“NGCS”) via IP-to-IP interface and Multimedia Messaging Emergency Services (“MMES”). If this is the issue raised by T-Mobile’s petition, T-Mobile’s operational responsibility demarcation point with the ESInet with NGCS for IP-to-IP interconnection should be established at the session border controller (“SBC”) of the ESInet with NGCS, unless otherwise negotiated by the parties. Similarly, the ESInet with NGCS should be

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<sup>4</sup> *Consumer and Governmental Affairs Bureau Seeks Comment on T-Mobile USA, Inc. Petition for Clarification or, in the Alternative Reconsideration of the Commission’s Real-Time Text Order*, CG Docket No. 16-145 and GN Docket No. 15-178 (rel. Feb. 27, 2017) (“T-Mobile Notice”) (available at [https://apps.fcc.gov/edocs\\_public/attachmatch/DA-17-197A1.txt](https://apps.fcc.gov/edocs_public/attachmatch/DA-17-197A1.txt)), with initial comments timely due on March 14, 2017.

<sup>5</sup> *Transition from TTY to Real-Time Text Technology; Petition for Rulemaking to Update the Commission’s Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology*, Report and Order and Further Notice of Proposed Rulemaking, FCC 16-169 (rel. Dec. 16, 2016) (“RTT Order”). (The RTT Order is available on the Commission’s website at <https://www.fcc.gov/document/adoption-real-time-text-rtt-rules>.)

<sup>6</sup> Per the NENA Master Glossary of 9-1-1 Terminology, “[a]n ESInet is a managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core services can be deployed, including, but not restricted to, those necessary for providing NG9-1-1 services. ESInets may be constructed from a mix of dedicated and shared facilities. ESInets may be interconnected at local, regional, state, federal, national and international levels to form an IP-based inter-network (network of networks). The term ESInet designates the network, not the services that ride on the network. *See*, NG9-1-1 Core Services.”

operationally responsible after the demarcation point for any necessary transcoding of an RTT call to TTY.

Separate from an ESInet with NGCS, however, the Commission has also stated that if a PSAP is capable of receiving RTT calls through a transitional enhanced Text Control Center (“TCC”) approach, such as via message session relay protocol (“MSRP”)<sup>7</sup>, the RTT Order provides the flexibility for wireless carriers to comply with the Commission’s RTT requirements through such a manner as specified by the PSAP.<sup>8</sup> If T-Mobile’s petition for clarification is asking about its operational responsibility demarcation when using a transitional enhanced TCC via MSRP approach, then it is premature for the Commission to answer that question at this time.

Before the Commission properly considers taking any formal action to clarify RTT 9-1-1 demarcations related to a transitional enhanced TCC via MSRP approach, there must be sufficient prior review and testing of the proposed specifications, which could include review and testing of service to legacy PSAPs in the manner specified. Accordingly, to the extent the T-Mobile petition is seeking clarification of a transitional enhanced TCC via MSRP approach, the Texas 9-1-1 Entities volunteer certain Texas 9-1-1 areas for such review and testing. As part of this undertaking, the issue of how to handle responsibilities for legacy PSAPs under the transitional enhanced TCC approach for RTT could also be tested at PSAPs prior to the Commission seeking to address this issue through a petition for clarification.

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<sup>7</sup> Per the NENA Master Glossary of 9-1-1 Terminology, MSRP is “[a] standardized mechanism for exchanging instant messages using SIP where a server relays messages between user agents.”

<sup>8</sup> See, RTT Order at ¶44 (“To ease any associated implementation burdens, we do not prescribe how 911 calls via RTT should reach a PSAP, but rather encourage wireless service providers and 911 authorities to consult with one another to resolve outstanding technical issues without undue delay. For instance, if a PSAP is capable of receiving RTT communications through an enhanced TCC, the approach that we adopt provides a service provider the flexibility to comply with our RTT requirement through such a manner as specified by the PSAP.” [Footnote in original omitted]).

## II. Initial Comments

The T-Mobile petition for clarification of the Commission's RTT Order asks the Commission to clarify that in the circumstance where a wireless carrier is requested to deliver RTT calls<sup>9</sup> "to an ESInet in its compatible form, IP",<sup>10</sup> the Commission did not intend for a carrier thereafter to "somehow insert itself into the interconnection between the PSAP and the ESInet ..." and "perform transcoding from RTT to TTY *after* the call has been delivered to the ESInet."<sup>11</sup> However, the precise scope of what T-Mobile intends by its petition is somewhat unclear, depending on the applicable context.

### A. ESInet with NGCS

Although subject to more than one interpretation, the T-Mobile petition for clarification more likely appears to request clarification regarding the appropriate RTT call operational responsibility demarcation point, in the situation where T-Mobile is requested to deliver the RTT call in IP format to an ESInet with NGCS via IP-to-IP interface and MMES.<sup>12</sup> If this is T-Mobile's question, consistent with the same rationale and reasoning that the Texas 9-1-1 Entities urged with regard to the recent Maine Notice,<sup>13</sup> T-Mobile's operational responsibility

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<sup>9</sup> In its definitions, the recent ATIS-0700029 standard on *Real Time Text Mobile Device Behavior* defines an "RTT Call" as "a call with RTT and voice components" (available for purchase at <https://www.atis.org/docstore/product.aspx?id=28300>).

<sup>10</sup> See, *T-Mobile USA, Inc. Petition for Clarification or, in the Alternative, Reconsideration* ("T-Mobile Petition") at p. 3 (Feb. 22, 2017) (available at <https://www.fcc.gov/ecfs/filing/102231846629100>).

<sup>11</sup> *Id.* at pp. 4-5.

<sup>12</sup> See, Emergency Access Advisory Committee ("EAAC"), Meeting Minutes: June 14, 2013 (available at <https://www.fcc.gov/general/emergency-access-advisory-committee-eaac>) ("The J-STD-110 has been published in March 2013 to define requirements, architecture, and procedures and available at the ATIS Document Center. The longer term standards-based solution is Multimedia Messaging Emergency Services (MMES) and will be addressed by ATIS in 3Q2013.").

<sup>13</sup> See, *Public Safety and Homeland Security Bureau Seeks Comment on Request of the State of Maine Public Utilities Commission to Address Demarcation Issues related to the Implementation of Text-to-911*

demarcation point with the ESInet with NGCS for IP-to-IP interconnection should be established at the SBC of the ESInet with NGCS, unless otherwise negotiated by the parties.<sup>14</sup> The ESInet with NGCS should be operationally responsible after the demarcation point for any necessary transcoding of an RTT call to TTY.

T-Mobile supports its petition by referencing a 2013 diagram regarding the then-current architecture of ESInets.<sup>15</sup> Recent information clearly supports T-Mobile's petition for clarification with regard to an ESInet with NGCS (although the relevant gateway could be beyond the NG9-1-1 PSAP and is called the Legacy PSAP Gateway (LPG), as opposed to how the 2013 diagram depicted a legacy PSAP being served by a gateway between the ESInet):

*TTY Call Handling at Legacy Network Gateway (LNG) and Legacy PSAP Gateway (LPG)*

- NENA-STA-010.2 requires that the LNG and LPG be capable of transcoding between Baudot tones and RFC 4103-based real time text to support emergency originations from TTY users and TTY call delivery to legacy PSAPs

...

*TTY Call Handling at Legacy Network Gateway (LNG) and Legacy PSAP Gateway (LPG) (cont.)*

- To handle "silent" calls, i3 Version 3 supports the ability for an i3 PSAP or LPG to send a SIP re-INVITE message to request that RFC 4103-based real time text media be added to the emergency call so that the PSAP/LPG can initiate a Real Time Text (RTT) response

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*Via Message Session Relay Protocol*, PS Docket Nos. 11-153 and 10-255 (rel. Jan. 9, 2017) ("Maine Notice") (available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2017/db0109/DA-17-3141.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0109/DA-17-3141.pdf)).

<sup>14</sup> See, Texas 9-1-1 Entities Initial Comments in PS Docket Nos. 11-153 and 10-255 on the Maine Notice at p. 6 (Feb. 8, 2017) ("Accordingly, without regard to the appropriate answer as to cost-demarcation for interim SMS text-to-9-1-1 service or other legacy technologies, the cost demarcation point with regard to future multimedia communications and new IP services for the ultimate end state of IP-to-IP interconnection should be the SBC of the ESInet with NGCS, unless otherwise negotiated by the parties.") (available at <https://www.fcc.gov/ecfs/filing/102082413512963> ).

<sup>15</sup> T-Mobile Petition at p. 4.

- An LNG is expected to accept the RTT offer received via the re-INVITE from the PSAP/LPG and interwork between RTT and TTY<sup>16</sup>

In actual deployments, the LPG may be a more preferred and economical standards-based approach than using the LNGs for such conversion. Regardless, the Texas 9-1-1 Entities agree with T-Mobile as to clarification of its responsibilities regarding an ESInet with NGCS.

### **B. Transitional Enhanced TCC via MSRP**

Separate from an ESInet with NGCS, the Commission has also stated that if a PSAP is capable of receiving RTT communications through a transitional enhanced TCC approach, the RTT Order provides the flexibility for wireless carriers to comply with the Commission's RTT requirements through such a manner as specified by the PSAP.<sup>17</sup> One such transitional enhanced TCC approach might be via the MSRP approach to deliver RTT calls to PSAPs.<sup>18</sup> If T-Mobile's petition for clarification is seeking clarification about its operational responsibility demarcation when using a transitional enhanced TCC via MSRP approach, then it is premature for the Commission to answer that question at this time, for at least two reasons. First, the routing and network call transfers to other PSAPs via a TCC/MSRP approach for RTT calls could be less operationally and technically similar to doing so using an ESInet with NGCS, and more operationally and technically similar to routing and network call transfers with regard to interim

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<sup>16</sup> 9-1-1 Standards & Best Practices Conference (October 2016) at pp. 7-8 (*available at* [https://dev.nena.org/kws/public/download/9474/20161011\\_1440-1540\\_Developing%20i3v3.pptx](https://dev.nena.org/kws/public/download/9474/20161011_1440-1540_Developing%20i3v3.pptx)).

<sup>17</sup> See, RTT Order at ¶44 ("To ease any associated implementation burdens, we do not prescribe how 911 calls via RTT should reach a PSAP, but rather encourage wireless service providers and 911 authorities to consult with one another to resolve outstanding technical issues without undue delay. For instance, if a PSAP is capable of receiving RTT communications through an enhanced TCC, the approach that we adopt provides a service provider the flexibility to comply with our RTT requirement through such a manner as specified by the PSAP." [Footnote in original omitted]).

<sup>18</sup> See, West Ex Parte in CG Docket 16-145 (Sept. 30, 2016) (*available at* <https://ecfsapi.fcc.gov/file/10930097364922/WSS%20Ex%20Parte%20RTT%20FILED.pdf>).

SMS text-to-9-1-1 under the ATIS J-STD-110.<sup>19</sup> Second, wireless carriers have not yet consulted with Texas PSAPs regarding delivery of RTT calls to PSAPs using a transitional enhanced TCC and this approach also has yet to be tested.<sup>20</sup>

In the RTT Order, the Commission encouraged carriers to inform state and local 9-1-1 authorities of their timetables for transitioning from TTY to RTT, and further encouraged state and local governments to conduct such testing and training in consultation with consumers and to share the results with other jurisdictions in order to facilitate the transition.<sup>21</sup> To the extent that the T-Mobile petition is seeking clarification of a transitional enhanced TCC via MSRP

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<sup>19</sup> See, AT&T Initial Comments in PS Docket Nos. 11-153 and 10-255 on the Maine Notice at pp. 2-3 (Feb. 8, 2017) (“For the interim text-to-911 solution, the Text Control Center (TCC) performs the analogous function of the Selective Router of identifying the PSAP and distributing, in this case, the text and any location information to the PSAP. Thus, the point of demarcation would be the egress side of the session border controller (SBC) used by the TCC. ... As the Commission has acknowledged, the current text-to-911 solution is interim. It is intended as a stopgap until the transition to fully integrated, multimedia NG911 is deployed. In the fully deployed NG911 environment, the NG911 service within the ESINet would perform the functions parallel to the selective router for TDM voice calls and the TCC for text-to-911. At that time, the appropriate demarcation point would be the ingress SBC for the NG911 network. But fully deployed, integrated NG911, with sunset of the interim text-to-911 solution, is well in the future and thus, the Commission need not address this issue now.”) [Footnote in original omitted] (available at <https://www.fcc.gov/ecfs/filing/10208276163119>).

<sup>20</sup> See, Texas 9-1-1 Entities Initial Comments in CG Docket No. 16-145 and GN Docket No. 15-178 at p. 3 (Feb. 22, 2017) (“The elimination of any RTT to TTY backward conversion requirement, at a minimum, should be based on deployments of fully IP end-to-end RTT to RTT for 9-1-1 service, testing and comparative evaluation by telecommunicators at multiple PSAPs. ... Accordingly, the Commission should take no further action at this time regarding a specific date (whether 2021 or another reassessment date) to terminate the Commission’s RTT to TTY backward conversion requirement. Instead, during the next year the Commission should gather information on: (i) the extent of actual working deployments of fully IP end-to-end RTT to RTT for 9-1-1 service (including testing and comparative evaluation at various PSAPs); and (ii) any potentially associated relevant changes in responsibilities for other involved 9-1-1 stakeholders in the absence of the Commission’s backward conversion requirement (including whether conversion responsibility would be transferred to another service provider [such as the legacy 9-1-1 selective router provider], any new costs, and any changes in expectations related to RTT by the United States Department of Justice). Thereafter, the Commission should perform a reassessment of the issue, if still necessary, in each subsequent year for as long as needed.”) (available at <https://www.fcc.gov/ecfs/filing/10222190560503>).

<sup>21</sup> See, RTT Order at ¶48. (“[T]o assist state and local 911 authorities in planning their testing and training activities, we encourage carriers to inform these authorities of their timetables for transitioning from TTY to RTT. We also encourage state and local governments to conduct such testing and training in consultation with consumers, and to share the results with other jurisdictions, to facilitate the transition”).

approach, the Commission on the State Emergency Communications, the Denco Area 9-1-1 District, and the Greater Harris County 9-1-1 Emergency Network District (each of which has already deployed with the TCCs via the MSRP approach for interim SMS text-to-9-1-1 service) have previously committed to work cooperatively with requesting carriers and other 9-1-1 stakeholders to evaluate the potential use of a transitional enhanced TCC via the MSRP approach that might permit RTT to RTT sooner in some cases than via the ESInet with NGCS approach.<sup>22</sup> As part of this evaluation, the issue of how to handle responsibilities for legacy PSAPs under the transitional enhanced TCC approach for RTT could also be tested at PSAPs prior to the Commission addressing through a petition for clarification, in the event of disagreement between 9-1-1 stakeholders on the issue.

### **III. Conclusion**

The Texas 9-1-1 Entities appreciate the opportunity to provide the foregoing initial comments on these important 9-1-1 matters, and respectfully request that the Commission take action in a manner consistent with these initial comments.

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<sup>22</sup> See, Texas 9-1-1 Entities Reply Comments to the RTT Order at pp. 5-6 (Mar. 24, 2017) (*available at* <https://www.fcc.gov/ecfs/filing/103240175906536>).



Respectfully submitted,



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March 31, 2017